

### Abstract of the Disclosure

The present invention provides a method for adjusting the yield and purity of a proteinase inhibitor extract from plant tissue, preferably potato tubers. The extraction and isolation of the proteinase inhibitor from potatoes begins with the addition of an organic acid, preferably formic acid, and a salt, preferably sodium chloride, to raw potatoes. The mixture is subjected to process steps to extract soluble proteins. The extract is subjected to heat treatment at an adjusted temperature and adjusted duration whereby purity of the proteinase inhibitor is enhanced by heating at a relatively high temperature for a relatively short duration and whereby yield of the proteinase inhibitor is enhanced by heating at a relatively low temperature for a relatively long duration. If the removal of soluble protein impurities that are not denatured during the heat treatment step is desired, ultrafiltration is used. By adjusting the cycles of filtration, purity of the proteinase inhibitor can be adjustably selected.